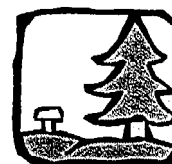


# 3. Identification of Issues and Potential Solution Options

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# 3. Identification of Issues and Potential Solution Options

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This section of the document provides a summary of the identified issues and an introduction to some potential solution options for each. Details on recommended solution options contained in the framework, or on the process to reach resolution for each of the issues, are presented in Section 4.

## 3.1 IDENTIFICATION OF ISSUES

The goal of CALFED's Water Transfer Program is to promote beneficial transfers, while ensuring that undesirable transfers do not occur. Many stakeholders believe that the existing water transfer market is flawed. Some believe there is a lack of accountability by transfer proponents to address potential adverse impacts of water transfers and that too much water already can be transferred. Others believe that the market faces barriers and disincentives that limit the potential for greater quantities of water to be transferred and that the current market provides adequate levels of protection to third parties. Regardless of one's viewpoint, several issues tend to constrain the development of the water market. Whether resolution of these issues increases or decreases the amount of water transferred in any given year or on average, these issues must be addressed by the CALFED Program.

Both the BDAC Water Transfer Work Group and the Transfer Agency Group were instrumental in identifying the issues that must be considered in developing a more efficient water transfer market. As previously stated in Section 2, these issues are sorted into three broad categories:

- ***Environmental, socioeconomic, and water resources protections*** - This category includes such issues as third-party socioeconomic impacts, groundwater protection, and local environmental protection.
- ***Technical, operational, and administrative rules*** - This category includes such issues as the rules for defining transferrable water, carriage water, and reservoir refill criteria; and permitting and regulatory process issues.
- ***Wheeling in and access to state/federal facilities (especially for cross-Delta conveyance)*** - These issues concern the desire to improve predictability and reliability of capacity in state or federal conveyance facilities and associated wheeling costs.



## **3.2 ESTABLISHMENT OF POTENTIAL SOLUTION OPTIONS**

For each issue discussed under the three broad categories, a set of potential solution options (actions, policies, or processes) has been provided. These represent ideas developed by both stakeholders and CALFED agency representatives during the numerous meetings held over the past three years. They do not represent every possible solution option, nor have they been subjected to any screening criteria or technical analysis. They are also not mutually exclusive in all instances (i.e., a combination of options may be needed to help resolve a particular issue). Screening of the potential solution options and development of integrated actions, policies, and processes are discussed under the recommended framework in Section 4.

## **3.3 ENVIRONMENTAL, SOCIOECONOMIC, AND WATER RESOURCES PROTECTIONS**

### **3.3.1 THIRD-PARTY SOCIOECONOMIC IMPACTS**

A major set of issues related to water transfers, particularly out-of-basin, long-term (multi-year) transfers, concerns third-party impacts. Generally, water transfers can result in three types of third-party impacts: (1) impacts on other legal users of water (usually downstream users), (2) environmental impacts, and (3) economic effects in the source area. The intent of existing law is to prohibit transfers that adversely affect other legal users of water. Existing law also generally requires that significant adverse environmental impacts of transfers be identified and mitigated. Socioeconomic impacts on a source area are not directly addressed by current law. (Water Code Section 1745.05 does provide for a limit on certain types of fallowing transfers, and in some circumstances, CEQA and/or NEPA analysis may identify and provide for mitigation of such impacts.) Many stakeholders believe that all impacts of a transfer, including those impacts on parties other than the buyer or seller (generally referred to as "third parties") should be identified so that they can be avoided or mitigated. In addition, source area stakeholders believe that identification of adverse impacts should be completed by objective, independent parties, not the transfer proponents.

It is generally recognized that certain types of transfers can result in adverse impacts on local economic conditions. Fallowing transfers, for example, may result in lower agricultural production in the source area and may affect local employment of farm workers and others. Groundwater transfers or transfers of surface water with groundwater replacement may result in lower groundwater levels, lower groundwater quality, and higher pumping costs for other local groundwater users. In extreme cases, affected groundwater users may lose the use of existing wells due to water quality degradation or lower groundwater levels.

The fundamental policy issue is to what extent should external impacts be internalized as transaction costs of the transfer. How are socioeconomic impacts identified? What level of documentation is required? Who decides what level of adverse impact is significant or unreasonable? Ultimately, this leads to a debate about who should have the authority to approve, disapprove, or condition a proposed transfer, and what is the proper scope of that authority.

Generally, these questions will arise in transfers based on land fallowing or crop shifting, or in transfers involving increased use or pumping of groundwater. True conservation transfers (reductions in irrecoverable losses) or storage transfers (release of stored water from a reservoir) probably do not generate the same level of third-party socioeconomic impacts because they do not affect the level of production or economic activity in the source water area.

## ***Potential Solution Options***

The following are potential solution options for issues concerning third-party socioeconomic impacts:

- Develop agreement on the definition of third-party impacts and identify which impacts should be addressed.
- Limits on the number of acres that can be fallowed (in order to produce transferrable water) in a given area (district or county) or the amount of water that can be transferred from a given area (district, service area, or county).
- A fee levied on transfers, that would be administered by local governments, to compensate the local area for increased social service costs incurred by local governments, to provide mitigation funds for compensating losses, or to pay for retraining farm workers.
- A mitigation or compensation fund for those who incur higher groundwater pumping costs as a result of a transfer or restrictions on direct groundwater or groundwater substitution transfers (establish a limit on groundwater level draw-down). This would have to be accompanied by a local groundwater monitoring program.
- A central or state-wide water transfer clearinghouse to collect and disseminate baseline data and information on transfers and transfer impacts, perform research using historical data to understand water transfer impacts, and provide for a public information process if not otherwise provided.
- A policy to require disclosure of potential socioeconomic, groundwater, and cumulative impacts as part of the transfer approval process.

### 3.3.2 GROUNDWATER RESOURCE PROTECTION

Groundwater transfers can be direct transfers (where groundwater is pumped into a conveyance system and transferred) or groundwater substitution transfers (where surface water is transferred and replaced with pumped groundwater). Transfers of either type can adversely affect the local aquifer and other overlying groundwater users. Under existing law, CEQA and/or NEPA represents the primary mechanism for identification, analysis, and mitigation of these impacts. Many stakeholders do not feel that these are adequate for this purpose.

Generally, only groundwater that is surplus to the needs of the overlying landowners can be directly transferred for use on non-overlying lands. There are also some statutory restrictions on transfer of groundwater from certain overdrafted basins (Salinas Valley, Sacramento, and Delta-Central Sierra basins). Common law also may allow existing users of groundwater in an overdrafted basin to prevent the transfer of groundwater from that basin. [Note that these rules apply to direct groundwater transfers but do not apply to groundwater substitution transfers where the groundwater is used on overlying lands.]

There is no state-wide groundwater regulation in California, unlike other western states. Rather, there is a patchwork system of local groundwater management, ordinances, adjudicated basins, and statutes. For example, California Water Code Section 1220 restricts direct export of groundwater within the combined Sacramento and Delta-Central Sierra basins unless pumping is in compliance with a groundwater management plan adopted by a county board of supervisors. (Pursuant to Water Code Section 1215, this restriction does not apply to CVP or SWP operations.) Water Code Section 1220 does not define what constitutes a groundwater management plan. For groundwater substitution transfers subject to Water Code Sections 1011.5 and 1745.10, "replacement pumping" is not permitted unless it is consistent with a groundwater management plan for that area or the water supplier determines that no long-term overdraft impact will result.

The SWRCB has no jurisdiction over groundwater transfers but does have authority to prohibit "waste or unreasonable use" of groundwater. Furthermore, the Board asserts that it has the authority to consider impacts on groundwater in its review of water rights change petitions. CEQA and/or NEPA documentation for a long-term transfer would include an analysis of impacts on groundwater.

Several Sacramento Valley counties have passed ordinances regulating the export of groundwater. Similar ordinances have been adopted or considered by some San Joaquin Valley counties. Many counties and water districts also have developed or are developing groundwater management programs.

To date, most transfers involving groundwater have been groundwater substitution transfers. In the San Joaquin Valley, some groundwater exchanges have occurred, where groundwater is pumped into a conveyance system in exchange for use of surface water elsewhere on the system either concurrently or at a later time.

Groundwater transfers, or surface water transfers based on groundwater substitution, without proper scrutiny and appropriate mitigation measures, could result in adverse impacts on groundwater resources, with significant adverse environmental and economic effects, in the source water area. Such impacts might include land subsidence, lower groundwater

levels and higher pumping costs, degradation of groundwater quality, reduced property values, impacts on vegetation dependent on groundwater, or in extreme cases, losses of existing wells. The potential for adverse impacts on groundwater resources makes transfers politically sensitive in source water areas, such as the Sacramento Valley.

Groundwater transfers involve several specific issues. First, when and subject to what conditions can groundwater be directly transferred and exported out of the basin? (A corollary question is “Are or should the rules be different for in-basin groundwater transfers?”) What impacts should be considered—water quality, pumping levels, short-term overdraft, long-term overdraft, impact on surface flows, or others? Are there circumstances in which transferred groundwater can be replaced with surface water that becomes available later in the year and used for irrigation or recharge?

Second, when can transferred surface water be replaced with groundwater? Can replacement be done concurrently with the period of the transfer or can the water be pumped later in the year? Most groundwater substitution transfers result in no change in the cropping or irrigation patterns that would have occurred with the use of surface water. In some cases, a water user may want to transfer surface water in spring or summer, and then pump groundwater to replace some or all of the surface water later in the year for a different crop than would have been grown with the surface water. Should there be limits on these types of transfers to protect the local groundwater resource from overdraft and to protect other overlying users of the groundwater from the increased costs of pumping groundwater from deeper levels than would have occurred in the absence of the transfer?

Third, does the “no injury” rule apply to groundwater substitution transfers which impact other overlying users? If so, the reviewing or approving agency would need to consider whether the water to be pumped meets certain criteria, such as (1) Is it truly groundwater, as opposed to subsurface flow; and (2) Will the pumping affect depletions from or accretions to a stream in such a way that the pumping will not produce any new or “real” water? Also, the potential for injury to a downstream user must be analyzed (see the discussion on the “no injury” rule under Section 3.4)

## ***Potential Solution Options***

The following options could protect groundwater resources:

- Local water management plans (Assembly Bill [AB] 3030) incorporating rules on groundwater transfers.
- Local ordinances to regulate groundwater transfers.
- Adjudication of groundwater basins.
- Development of additional data regarding the Sacramento Valley groundwater basin to enable a better understanding of the relationships between surface water and groundwater and the recharge capacity of the aquifer (or aquifers).

- State legislation to more clearly define the limitations on transfers of groundwater or groundwater replacement or to require broader application of local groundwater management plans.
- A central or state-wide water transfer clearinghouse to collect and disseminate baseline data and information on transfers and transfer impacts, perform research using baseline data to understand correlations between different parameters, and provide for a public information process if not otherwise provided.
- A policy to require disclosure of potential socioeconomic, groundwater, and cumulative impacts as part of the transfer approval process.
- Locally managed conjunctive use programs.
- Comprehensive regional groundwater modeling.
- State/federal assistance program to aid local entities in developing and implementing groundwater management programs in water transfer source areas.

### 3.3.3 AREA OF ORIGIN AND WATERSHED PRIORITIES

Many of the primary source areas for water transfers are protected by county of origin or watershed protection priorities. Some stakeholders believe that these protections need to be further strengthened prior to implementation of long-term transfers out of the source area. Some stakeholders also believe that in-basin transfers should be given a priority over out-of-basin transfers.

#### *Potential Solution Options*

The following options could protect area of origin and watershed priorities:

- Modify transferrable water rules to facilitate in-basin, source area transfers.
- Streamline the permit process for in-basin or sub-basin transfers.
- Additional statutory provisions on watershed protection.
- Additional legislation to protect water rights, including area of origin priorities.

### 3.3.4 ENVIRONMENTAL PROTECTION IN SOURCE AREAS

Some stakeholders are concerned that the analyses of environmental impacts associated with water transfers have been inadequate. While current law (CEQA and/or NEPA) generally requires an environmental analysis of the potential impacts of proposed water transfers, one year transfers are exempt from CEQA analysis. Although the SWRCB must still make a

finding of no adverse impact, there is a concern that a series of one year transfers may result in cumulative adverse impacts that are not subject to environmental analysis or mitigation requirements. However, CEQA specifically prohibits an agency from “piecemealing” a project to avoid environmental analysis (i.e., separating a large project into smaller pieces to expedite permits). Transfers proposed by CVP contractors pursuant to the CVPIA do not have such exemptions. These transfers, including short-term transfers of 1 year or less, are subject to NEPA analysis. However, some stakeholders are concerned that the use of an environmental assessment under NEPA that leads to a Finding of No Significant Impact, or FONSI, limits public review of proposed federal water transfer actions and that some of these actions have resulted in unmitigated adverse impacts.

## ***Potential Solution Options***

The following options could provide environmental protection in source areas.

- Limited or no use of programmatic environmental impact reports, more use of project-specific and local impact analysis, and greater emphasis on cumulative impacts analysis pursuant to CEQA and/or NEPA.
- Guidebook of feasible mitigation measures to assist decision makers when adverse impacts are identified.
- A central or state-wide water transfer clearinghouse to collect and disseminate baseline data and information on transfers and transfer impacts, perform research using baseline data to understand correlations between different parameters, and provide for a public information process if not otherwise provided.

### **3.3.5 IN-STREAM FLOW (SECTION 1707) TRANSFERS**

California Water Code Section 1707 states: “Any person entitled to the use of water, whether based upon an appropriative, riparian, or other right, may petition the board ... for a change for purposes of preserving or enhancing wetlands, fish and wildlife resources, or recreation in, or on, the water.”

Other than transfers under Water Code Section 1707, current law does not recognize in-stream or environmental water rights. Furthermore, there is no uniformly agreed on method of tracking and accounting for in-stream transfers over and above a given regulatory baseline flow. Some stakeholders recommend a more formal legal status for in-stream and environmental transfers.

In-stream flow transfers, or Section 1707 transfers, refer to the transfer of water from a consumptive use to a non-consumptive use (with an identified need), which results in a reduced diversion from the system and increased in-stream flow or Delta outflow. California water law does not provide for the appropriation of water for in-stream fish and wildlife uses. Leaving water in the stream for fish or wildlife purposes has not been considered to meet the test of “taking control” of the water, which is the hallmark of appropriation for domestic, municipal and industrial, or irrigation purposes. In 1991, however, Water Code



Section 1707 was enacted to allow water right holders to dedicate all or part of their rights for in-stream purposes.

The transfer, or change in place of use, under Section 1707 may be temporary or permanent. The SWRCB has received a few requests for Section 1707 changes, but only two such transfers have been approved.

The rights to Section 1707 water left in the stream are based on the priority date of the water right. Therefore, a user with a relatively recent water right may forego his direct diversion in order to protect in-stream uses under Section 1707 only to find that during water-short periods more senior water right holders can legally divert this water downstream, thus nullifying his efforts. If the Section 1707 transferor has senior rights or the water involved is stored or otherwise foreign to the stream system, then it must be protected from illegal diversion by downstream water users with junior rights. If a senior or junior water holder is legally able to divert this water, it demonstrates that the transferor did not have a legal right to transfer the water in the first place. Any time a water right is modified to change its place or purpose of use, the amount of transfer water essentially goes to "the end of the line" in seniority. This protects downstream water right holders, both senior and junior, that may be legally entitled to any water the transferor cannot put to beneficial use under its existing permit conditions.

Once the Section 1707 water reaches the Delta, accounting for the water depends on the desired use of the water. If the ultimate desired use of the water is to increase Delta outflow or other enhanced environmental protection beyond the existing standards, it must be accounted for differently than if the transfer is intended to satisfy existing demands or regulatory standards.

## ***Potential Solution Options***

The following options could provide environmental and water resource protection for in-stream flow (Section 1707) transfers:

- A procedure to track and account for allowable depletions that will accrue to Section 1707 transfers which are intended to reach the Delta.
- An environmental water transfer registry.
- Establishment of in-stream and environmental water rights.

### **3.3.6 RULES AND GUIDELINES FOR ENVIRONMENTAL WATER TRANSFERS**

As the volume of water transfers for environmental purposes has increased over the past few years, several questions have arisen. Should the rules for environmental or in-stream water transfers be the same as transfers for other purposes? Under what circumstances should environmental water be available for export from the Delta? How can transfers be developed that will provide multiple benefits (can a transfer for consumptive use purposes be modified